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Amendments to the Claims:

This listing of claims will replace all prior versions of the claims in this application:

Listing of Claims:

Claim 1 (currently amended): A radio frequency (RF) coil array configured for use in magnetic resonance imaging and/or analysis of a subject located within a space (the homogeneous space) in which a homogeneous static magnetic field is operatively applied in a first direction, the RF coil array comprising a plurality of individual coil elements angled relative to each other, with each of the individual coil elements (i) being [[and]] electrically separate from each of the other individual coil elements, each coil element and (ii) having a pair of main conductors extending generally parallel to the first direction of the magnetic field and located on opposite sides of the homogeneous space in a single plane, said single plane passing through the middle of the homogeneous space, and a connection conductor connected between respective ends of the main conductors, said connection conductor being generally transverse to the first direction.

Claim 2 (currently amended): A coil array as claimed in claim 1, wherein the homogeneous space is a cylindrical space, ~~and the main conductors extend axially and are located diametrically opposite each other.~~

Claim 3 (canceled)

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Claim 4 (currently amended): A coil array as claimed in claim 2, ~~[[3,]]~~ wherein the individual coil elements are equi-angularly spaced about the axis of the cylindrical space, the angle between adjacent coil elements ~~[[coils]]~~ being $360/N$, where N is the number of coil elements in the array.

Claim 5 (previously amended): A coil array as claimed in claim 2, wherein the connection conductor extends around the periphery of the cylindrical space at an axial end thereof to thereby permit access to the cylindrical space through that end.

Claim 6 (currently amended): A coil array as claimed in claim 2, wherein the individual coil elements are arranged in one or more orthogonal pairs with respect to one another.

Claim 7 (currently amended): Magnetic resonance ~~Resonance~~ imaging apparatus comprising

[[a]] an imaging space configured for receiving a subject to be imaged,
a magnet ~~[[means]]~~ for applying a homogeneous static magnetic field to the imaging space in a first direction, and
a radio frequency (RF) coil array comprising a plurality of angularly spaced, individual coil elements, each individual coil element being electrically separate from each of the other individual coil elements and having a pair of main conductors extending generally parallel to the first direction of the magnetic field and located on opposite sides of the imaging space in a single plane, said single plane passing through the middle of the imaging space, and a connection conductor connected between respective ends of the main conductors, said connection conductor being generally transverse to the first direction.

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Claim 8 (currently amended): Apparatus as claimed in claim 7, wherein the imaging space is a cylindrical space, ~~and the main conductors extend axially and are located diametrically opposite each other.~~

Claim 9 (canceled)

Claim 10 (currently amended): Apparatus as claimed in claim 8, ~~[[9,]]~~ wherein the individual coil elements are equi-angularly spaced about the axis of the cylindrical space, the angle between adjacent individual coil elements ~~coils~~ being $360/N$, where N is the number of individual coil elements in the array.

Claim 11 (previously amended): Apparatus as claimed in claim 8, wherein the connection conductor extends around the periphery of the cylindrical space at an axial end thereof to thereby permit access to the cylindrical space through that end.

Claim 12 (currently amended): Apparatus as claimed in claim 8, wherein the individual coil elements are arranged in one or more orthogonal pairs with respect to one another.

Claim 13 (currently amended): Apparatus as claimed in claim 7, wherein each individual coil element is used as a receiver coil, the apparatus further comprising a plurality of receiver channels each connected to a respective individual coil element, and means for combining the signals from each individual coil element in order to form a composite image.

Claim 14 (currently amended): Apparatus as claimed in claim 7, wherein at least one individual coil element is utilized ~~adapted to be used~~ as both a transmitter and receiver coil.

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Claim 15 (currently amended): Apparatus as claimed in claim 7, wherein the individual coil elements are arranged in one or more orthogonal pairs, the individual coils elements of a pair being orthogonal with respect to one another, one individual coil element in each orthogonal pair being utilized ~~adapted for use~~ as a transmitter coil and the other individual coil element in each orthogonal pair being utilized ~~adapted for use~~ as a receiver coil, each orthogonal pair being sequentially active, the apparatus further comprising a receiver channel and ~~switching means~~ a switch for selectively connecting the receiver channel sequentially to the receiver coil of the active orthogonal pair.

Claim 16 (currently amended): Apparatus as claimed in claim 15, wherein each transmitter coil of each orthogonal pair ~~is adapted to generate~~ generates a radio frequency pulse of different amplitude and phase ~~[[to]]~~ from that generated by the transmitter coil(s) of the other orthogonal pair(s).

Claim 17 (currently amended): A rotary switched RF coil array arrangement configured for combined parallel magnetic resonance imaging of a subject located in a cylindrical imaging space in which a homogeneous static magnetic field is operatively applied in a first direction, the coil array arrangement comprising

a plurality of ~~electrically separate coils~~ individual coil elements spaced angularly about the axis of the cylindrical imaging space, each individual coil element being electrically separate from each of the other individual coil elements and including a pair of main conductors extending axially on diametrically opposite sides of the cylindrical imaging space in a single plane, said single plane passing through the middle of the cylindrical imaging space, and a connection conductor connected between respective ends of the main conductors, said connection conductor being generally transverse to the first direction,

a receiver channel, and

~~switching means~~ a switch for selectively connecting the receiver channel sequentially to the ~~coils~~ individual coil elements.

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Claim 18 (currently amended): A coil array arrangement as claimed in claim 17, wherein each coil has a connection conductor connected between respective ends of the main conductors, the connection conductor being conductors are non-diametrical at an axial end of the cylindrical imaging space to permit access ~~through the respective axial end of the~~ to the cylindrical imaging space at that axial end.